Data Visualisation

Libraries

```
library(GGally)
library(tidyverse)
library(datasets)
library(tidyverse)
library(gapminder)
library(GGally)
library(ggridges)
library(RColorBrewer)
library(ggmosaic)



library(sf)
library(ggplot2)
library(dplyr)
library(GGally)
library(tidyverse)
library(datasets)
library(tidyverse)
library(gapminder)
library(GGally)
library(ggridges)
library(RColorBrewer)
library(ggmosaic)
library(corrplot)
library(sjPlot)
```

Relationship between 2 variables

```
plot(x = mtcars$disp, y = mtcars$mpg)
```

Save it to an object and save it to a file

```
stocklineplot ← ggplot(
data = stocks_apple,
mapping = aes(x = date,
y = price_indexed)) +
geom_line()

stocklineplot


ggsave(filename = "Lineplot_stocks.pdf",
plot = stocklineplot
)
```

Patchwork

```
library(patchwork)

patchwork ← scatterplot_cars + lineplot_stocks
patchwork
```

Scatterplot with Line Plot

```
stocks_fb ←  stocks[which(stocks$company == "Facebook"),]

ggplot(data=stocks_fb, mapping = aes(x = date, y = price_indexed)) +
geom_point(size=0.02) + geom_line()
```

Scatterplot with diff color for each group

```
ggplot(data = mtcars,
mapping = aes(
```

```
    x = disp,
    y = mpg,
    color = as.factor(cyl)
    )
) +
geom_point()
```

Scatterplot with line plots for each group

```
ggplot(data=votes,
mapping = aes(
    x=year,
    y = candidatevotes,
     color= factor(party_simplified))) +
    geom_point(stat="summary", fun="mean") +
     geom_line(stat="summary", fun="mean")
```

Scales

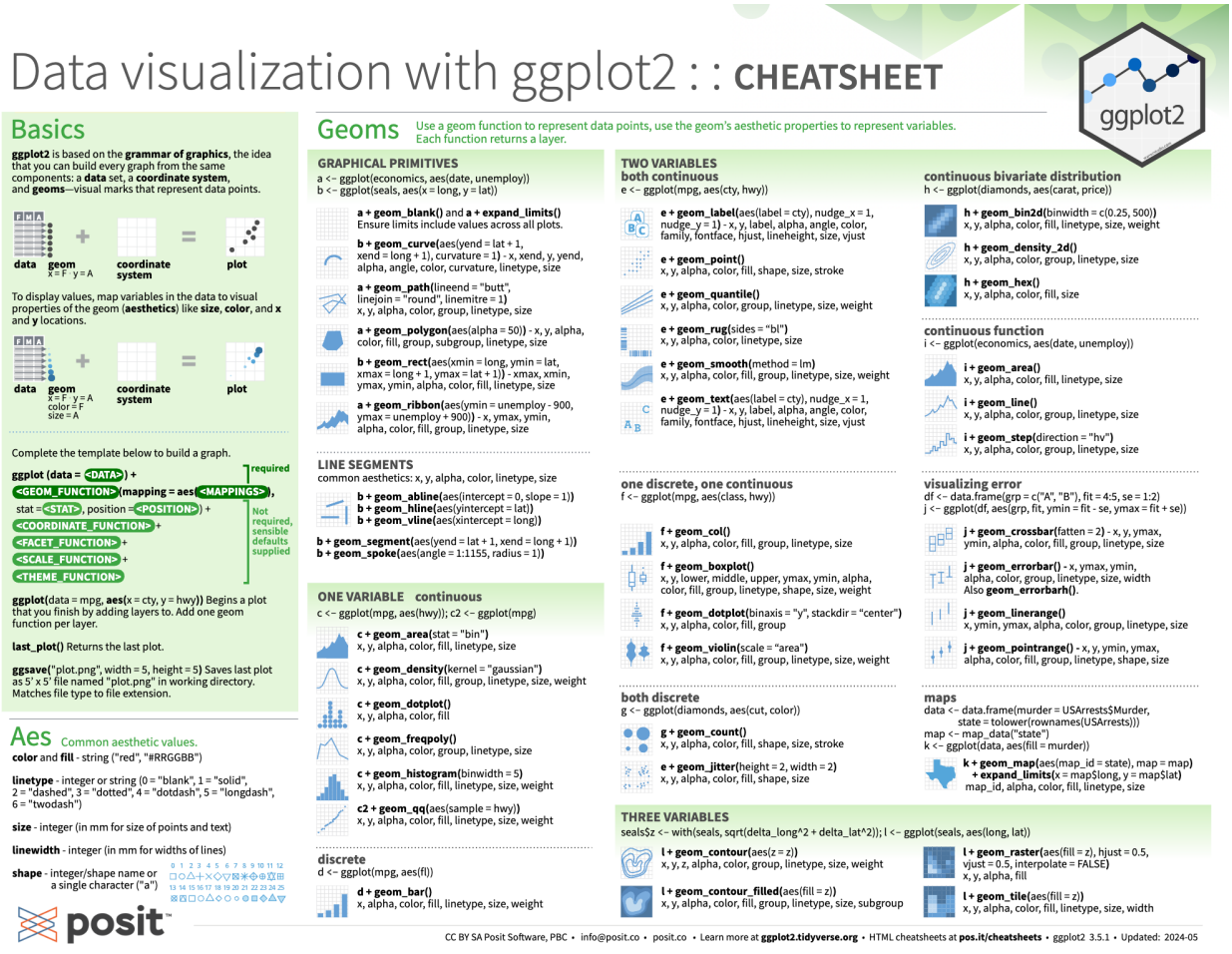
```
ggplot(data = mtcars,
mapping = aes(x = disp,
y = mpg,
color =
as.factor(cyl))) +
geom_point() +
scale_x_continuous() +
```

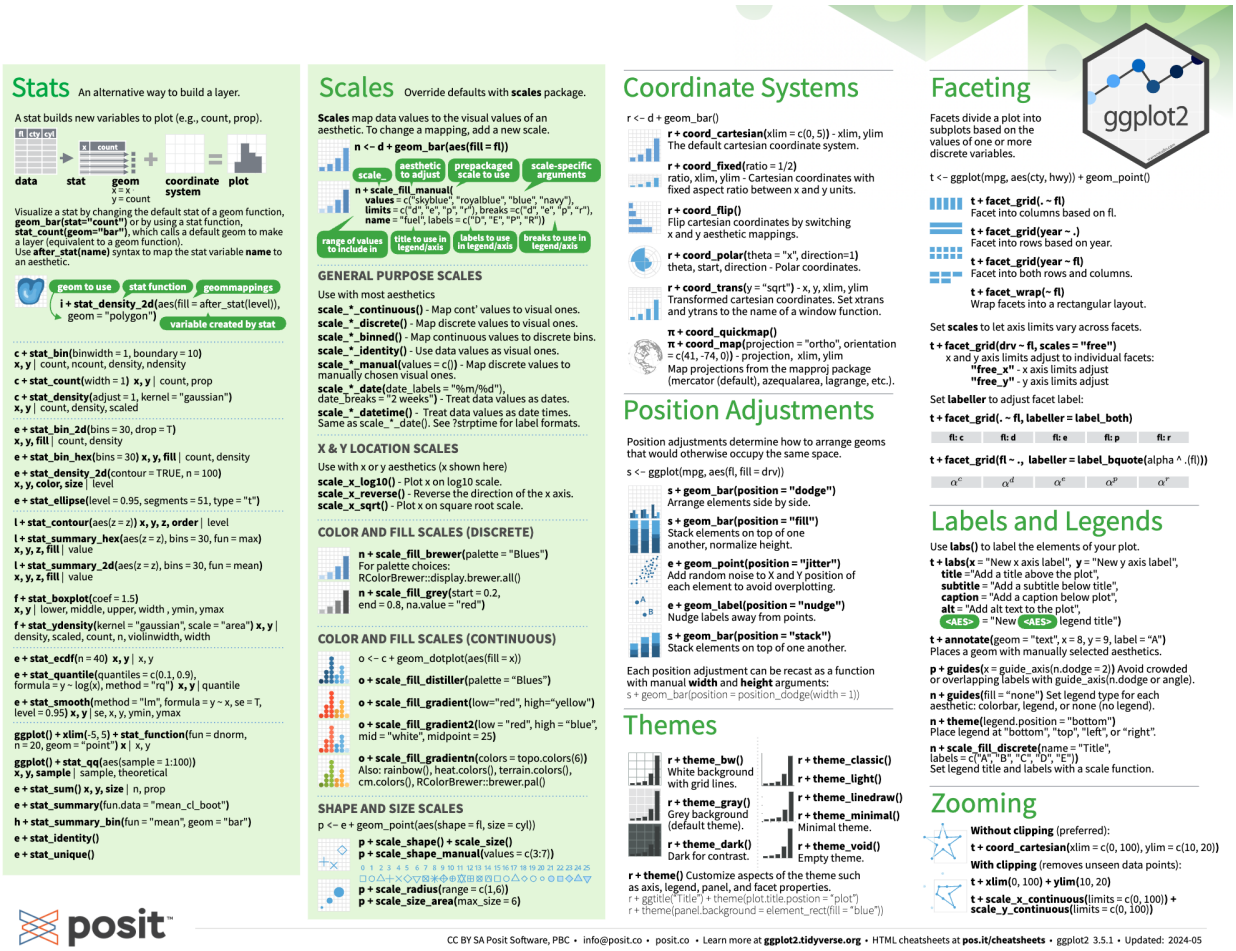
scale_y_continuous() +
scale_color_discrete()

Two plots in one image

library(patchwork)

patchwork ← scatterplot_cars + lineplot_stocks
patchwork





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[Scatterplots]

[Lineplots]

[Bar Graphs]

[Histogram]

[Density Plot]

[Time Series]

[Bubble Plot]

[Empirical distribution plot]

[Spaghetti Plot]

Special Colors

Legends

Shapes

Themes

Split Plots

Text

Pie Chart

Boxplots

Density Ridges

Labels

Challenges

Facet Grid

Smoothing

Corrplot

If Else

Functions

Geospatial

Error Bars